

ABSTRACT

An imaging system is provided to minimize pixel defects by capturing an image in the spatial frequency domain. An image processor receives the spatial frequency-domain image data from the imager and transforms the frequency-domain image data into spatial-domain image data. To capture the image in the spatial frequency domain, an optical lens is placed between a spatial representation of an image object and the imager. The optical lens performs an approximate Fourier transform on light emanating from the spatial representation of the image object toward the imager. The image processor performs an approximate inverse Fourier transform on the data received from the imager, restoring the spatial representation of the image.